

## **5. Claims**

I claim:

1. A method of relieving an itch, pain, and swelling resulting from insect bites and stings, said method comprising the step of topically applying to the affected area a pharmaceutical composition containing an effective amount of an abrasive ingredient, together with a carrier material for said abrasive ingredient.
2. The method according to claim 1, wherein the abrasive ingredient is selected from the group consisting of walnut shells, pumice, plastic materials, sand or stone, glass, seed or fruit shells, seeds, metal, any sort of brush, abrasive applicators, chitosan or ground crab shells, all at 35-60 mesh.
3. The method according to claim 2, wherein said abrasive ingredient is applied as a solution in an aqueous pharmaceutical carrier.
4. A pharmaceutical composition for topical application to the site of insect bites and stings to relieve the itch, pain, and swelling associated therewith, comprising an effective amount of an abrasive ingredient selected from the group thereof consisting of walnut shells pumice, plastic materials, sand or stone, glass, seed or fruit shells, seeds, metal, any sort of brush, abrasive applicators, chitosan or ground crab shells, all at 35-60 mesh, and a carrier for said active ingredient suitable for topical application to the human skin, said carrier selected from the group consisting of vegetable and fruit oils, soaps, surfactants, lubricants, mineral oils, petrolatum, gels lotions, emollients, white petroleum, beeswax, di-propylene glycol, gums, lubricating jelly and olive oils.

5. The pharmaceutical composition for topical application according to claim 4, wherein an itch-reducing amount of an enzyme chosen from the group consisting of papain, subtilisin, and pancreatin, is added to the pharmaceutical composition for application to the surface of the skin proximate to said insect bite or sting.

6. The pharmaceutical composition for topical application according to claim 4, wherein the composition is in the form of a lotion.

7. The pharmaceutical composition for topical application according to claim 4, wherein the composition is in the form of a paste.

8. The pharmaceutical composition for topical application according to claim 4, wherein the composition is in the form of a liquid.

9. The pharmaceutical composition for topical application according to claim 4, wherein the composition is in the form of a powder.

10. The pharmaceutical composition for topical application according to claim 4, wherein the composition additionally includes an anesthetic.

11. The pharmaceutical composition for topical application according to claim 10 wherein the anesthetic is selected from the group consisting of menthol, Benadryl, diphenhydramine hydrochloride, germicidal disinfectants, aloe/aloe vera, silicone, antiseptic preparations, antimicrobial agents such as PCMX, broad spectrum surface disinfectants, lidocaine, boric acid/borates, vitamins, oils from flowers, plants or animals, Neosporin, hydrocortisone cream/acetate, swelling and pain reducers, benzocaine, isobutene, hydrogen peroxide, iodine, zinc acetate, ammonia hydroxide, citronella, peppermint oil, analgesic/antihistamine ingredients, calamine, camphor, clove oil and methylparaben.

12. The pharmaceutical composition according to claim 5 wherein said abrasive ingredient and said anti-itch enzyme are applied as a solution in an aqueous pharmaceutical carrier.

13. The pharmaceutical composition for topical application to the site of insect bites and stings to relieve the itch, pain, and swelling associated therewith, comprising an effective amount of an abrasive ingredient; and effective amount of an anti-itch enzyme; said abrasive ingredient and said anti-itch enzyme being dispersed in a water based pharmaceutical carrier comprising effective amounts of polysorbate 60; isopropyl palmitate; pentaerythrityl tetracaprylate/caprate; poliwax emulsifying wax NF; cetearyl alcohol; ethyl alcohol; sodium hydroxide; NaHCO<sub>3</sub>; and propylene glycol.

14. The pharmaceutical composition for topical application according to claim 13, wherein the composition is in the form of a lotion.

15. The pharmaceutical composition for topical application according to claim 13, wherein the composition is in the form of a paste.

16. The pharmaceutical composition for topical application according to claim 13, wherein the composition is in the form of a liquid.

17. The pharmaceutical composition for topical application according to claim 13, wherein the composition is in the form of a powder.

18. The pharmaceutical composition for topical application according to claim 13, wherein the composition additionally includes an anesthetic.

19. The pharmaceutical composition for topical application according to claim 18, wherein the anesthetic is selected from the group consisting of menthol, Benadryl, diphenhydramine hydrochloride, germicidal disinfectants, aloe/aloe vera,

silicone, antiseptic preparations, antimicrobial agents such as PCMX, broad spectrum surface disinfectants, lidocaine, boric acid/borates, vitamins, oils from flowers, plants or animals, Neosporin, hydrocortisone cream/acetate, swelling and pain reducers, benzocaine, isobutene, hydrogen peroxide, iodine, zinc acetate, ammonia hydroxide, citronella, peppermint oil, analgesic/antihistamine ingredients, calamine, camphor, clove oil and methylparaben.

20. A method of producing the pharmaceutical composition for topical application according to claim 13, comprising the steps of:

adding distilled water and propylene glycol to a first vessel;  
heating the first vessel to 75 degrees Celsius with stirring;  
adding to a second vessel, effective amounts of polysorbate 60, isopropyl palmitate, pentaerythrityl tetracaprylate/caprate, poliwax emulsifying wax NF, and cetearyl alcohol;  
heating the second vessel to 75 degrees Celsius with some stirring until homogeneous;  
adding the contents of the second vessel slowly to the first vessel, with rapid mixing;  
adding an Ethyl alcohol to the combined mixture in vessel 1;  
removing the combined mixture in vessel 1 from the heat and start cooling said vessel;  
stirring in an abrasive ingredient and NAHCO<sub>3</sub> and anti-itch enzyme at 50 degrees Celsius;  
adjusting the PH to 7.50;  
stirring in the Sodium Hydroxide; and  
checking the pH is again and adjusting if necessary.

21. A pharmaceutical composition for topical application to the site of insect bites and stings to relieve the itch, pain, and swelling associated therewith, comprising an

effective amount of an abrasive ingredient and a carrier for said active ingredient suitable for topical application to the human skin.

22 21. The composition according to Claim 21, wherein the abrasive ingredient is selected from the group thereof consisting of walnut shells pumice, plastic materials, sand or stone, glass, seed or fruit shells, seeds, metal, any sort of brush, abrasive applicators, chitosan or ground crab shells.

22 22. The composition according to Claim 22, wherein the abrasive ingredient is at 35-60 mesh.

4 23. The composition according to Claim 21, wherein the carrier is said carrier selected from the group consisting of vegetable and fruit oils, soaps, surfactants, lubricants, mineral oils, petrolatum, gels lotions, emollients, white petroleum, beeswax, di-propylene glycol, gums, lubricating jelly and olive oils.

5 24. The composition according to Claim 21, wherein an itch-reducing amount of an enzyme chosen from the group consisting of papain, subtilisin, and pancreatin, is added to the pharmaceutical composition for application to the surface of the skin proximate to said insect bite or sting.

6 25. The pharmaceutical composition for topical application according to claim 21, wherein the composition is in the form of a lotion.

7 26. The pharmaceutical composition for topical application according to claim 21, wherein the composition is in the form of a paste.

8 27. The pharmaceutical composition for topical application according to claim 21, wherein the composition is in the form of a liquid.

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28. The pharmaceutical composition for topical application according to claim 21, wherein the composition is in the form of a powder.

10 29. The pharmaceutical composition for topical application according to claim 21, wherein the composition additionally includes an anesthetic.

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30. The pharmaceutical composition for topical application according to claim 29, wherein the anesthetic is selected from the group consisting of menthol, Benadryl, diphenhydramine hydrochloride, germicidal disinfectants, aloe/aloe vera, silicone, antiseptic preparations, antimicrobial agents such as PCMX, broad spectrum surface disinfectants, lidocaine, boric acid/borates, vitamins, oils from flowers, plants or animals, Neosporin, hydrocortisone cream/acetate, swelling and pain reducers, benzocaine, isobutene, hydrogen peroxide, iodine, zinc acetate, ammonia hydroxide, citronella, peppermint oil, analgesic/antihistamine ingredients, calamine, camphor, clove oil and methylparaben.

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31. The pharmaceutical composition according to claim 22 wherein said abrasive ingredient and said anti-itch enzyme are applied as a solution in an aqueous pharmaceutical carrier.